

**CLAIM AMENDMENTS**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims**

1 1. (Currently Amended) A method of displaying all connections between a  
2 subject node and outside nodes not displayed on links connecting a network device  
3 with network devices outside a map currently presented on a graphical user  
4 interface (GUI) of a communication network, wherein each of said outside nodes is  
5 associated with at least one of a plurality of outside node groups, the method  
6 comprising:

7 collecting data for all objects to be displayed on said map in response to a  
8 request transmitted over said GUI, said request specifying an area of interest in the  
9 network;

10 bundling, for each of said plurality of outside node groups, said connections  
11 between said subject node and said outside nodes belonging to said outside node  
12 group to create an outside link bundle; connections between said network device  
13 and groups of network devices into a plurality of outside links, wherein said map  
14 corresponds to said area of interest and each outside link represents a group of  
15 network devices outside said map;

16       grouping ~~said outside link bundles the plurality of outside links for said~~  
17 ~~network device into a multiple link connector (MLC) object and associating said~~  
18 ~~MLC object with an interactive connector icon with said MLC object;~~

19       displaying ~~said interactive connector icon on said map, wherein said map~~  
20 ~~showing said interactive connector icon is attached to said subject node network~~  
21 ~~device; and~~

22       ~~selecting said interactive connector icon for displaying, responsive to~~  
23 ~~selecting said interactive connector icon, a pop-up window showing a multiple link~~  
24 ~~connector (MLC) list wherein each outside link bundle and corresponding outside~~  
25 ~~node group are displayed as an item in said MLC list, where each outside link is~~  
26 ~~associated with a respective group.~~

1       2.     (Canceled)

2  
1       3.     (Currently Amended) The method of claim 1, wherein:

2       said ~~MLC multiple link connector list~~ displays in each row an interactive  
3 outside link widget associated with a respective interactive group identification  
4 widget,

5       each interactive outside link widget is associated with one of said outside link  
6 bundles a respective outside link of said plurality of outside links, and

each interactive group identification widget is associated with a respective  
~~one of said outside node groups, group of network devices.~~

4. (Currently Amended) The method of claim 3, further comprising:  
selecting said interactive outside link widget on said ~~MLC, multiple link~~  
~~connector~~ list to display a connections list L(n) identifying all connections bundled  
within said outside link ~~bundle object.~~

5. (Currently Amended) The method of claim 3, further comprising:  
selecting said respective interactive group identification widget on said  
multiple link connector list to display a sub-map of said network showing ~~said one~~  
~~of said outside node groups, all network devices in said group.~~

6. (Currently Amended) A system for providing a modified graphical user  
interface (GUI) adapted to transmit commands and display information with a view  
to enable management of a communication network, the system comprising:  
a map data collector that collects map data for a network device to be  
displayed on a map of interest;  
a multiple link connector (MLC) generator that bundles connections between  
said network device and ~~each of a plurality of~~ groups of outside network devices

external to said map into an outside link bundle—a plurality of outside links, and maintains a connections list L(n) for each of said outside link bundles;

a list organizer that groups said outside link bundles—plurality of outside links for said network device into a multiple link connector (MLC) and associates said ~~MLC with an~~ interactive connector icon with said MLC, wherein said interactive connector icon is displayed on said map and is attached to said network device; and

an interface that displays a multiple link connector (MLC) list in response to a selection of said interactive connector icon, each row of said MLC list showing an association between one of said each outside link bundles and a respective one of said plurality of groups—group of outside network devices.

7. (Canceled)

8. (Currently Amended) The modified GUI of claim 6,  
wherein each said outside link bundle is displayed on said MLC list using an interactive outside link widget.

9. (Currently Amended) The modified GUI of claim 6,

wherein each said group of outside network devices associated with said respective  
outside link bundle is displayed using an interactive group identification widget.

10. (Currently Amended) The modified GUI of claim 8,  
wherein said list organizer displays said list of connections L(u) associated with a  
respective outside link bundle, MLC-list in response to selection of said interactive  
outside link widget.

11. (Original) The modified GUI of claim 9,  
wherein said list organizer displays a sub-map of said group in response to selection  
of said interactive group identification widget.

12. (Currently Amended) The modified GUI of claim 6,  
wherein said interactive connector icon is not generated for a MLC containing only  
one connection-a single-connection.

13. (Currently Amended) A method of using a modified graphical user interface  
(GUI) adapted to reduce the cluttering of icons on a map of interest, the method  
comprising:

whenever a network device ~~has connections to a group is connected to groups~~  
of outside network devices external to said map, bundling said ~~connections-groups~~  
into ~~an outside link bundle; a plurality of outside links;~~

displaying an interactive multiple link connector ~~(MLC)~~ icon, the ~~MLC~~  
~~multiple link connector icon grouping all outside link bundles associated with said~~  
~~network device the plurality of outside links~~ into a single icon; and

selecting said ~~MLC multiple link connector icon~~ on said map to obtain a  
multiple link connector ~~(MLC)~~ list that displays an interactive outside link widget  
~~for each of said outside link bundles, each interactive outside link widget~~ associated  
with an interactive group identification widget for each group of outside network  
devices connected to said network device.

14. (Currently Amended) The method of claim 13, further comprising:

selecting said interactive outside link widget for said ~~associated~~ outside link  
~~bundle to obtain a list L(n) with all connections contained in said associated outside~~  
~~link bundle between said network device and said group.~~

15. (Currently Amended) The method of claim 13, further comprising:

selecting said interactive group identification widget on said multiple link  
connector list to display a sub-map of all network devices in said ~~associated~~ group.

1 16. (Currently Amended) For a GUI of a communication network, a computer-  
2 readable ~~media-medium~~ embodying a comprehensive network map illustrating all  
3 outside links to a plurality of network devices external to said map, comprising:

4 a network device icon, illustrating a network device in the context of said  
5 map;

6 an interactive multiple link connector (MLC) icon associated to said network  
7 device, representing all outside links between said network device and all groups of  
8 outside network devices connected to the network device, wherein said MLC  
9 ~~multiple-link-connector~~ icon comprises a button for enabling display of a multiple  
10 link connector (MLC) list; and

11 a pop-up window displaying said MLC list, wherein each row in said MLC list  
12 displays one of said outside links and said group of outside network devices to which  
13 said outside link connects ~~multiple link-connector list, said multiple-link-connector~~  
14 ~~list showing an association between each said outside link and a respective group of~~  
15 ~~said outside network devices.~~

1 17. (Canceled)

1 18. (Currently Amended) The computer-readable ~~media-medium~~ of claim 16,  
2 wherein each row of said multiple link connector list comprises an outside link  
3 widget associated with a group identification widget.

1 19. (Currently Amended) The computer-readable ~~media~~medium of claim 18,  
2 further comprising;

3 a list with all connections between said network device and said group, the  
4 list displayed on said map upon selection of said outside link widget.

1 20. (Currently Amended) The computer-readable ~~media~~medium of claim 18,  
2 further comprising;

3 a sub-map of said group displayed on said map upon selection of said group  
4 identification widget.

21. (New) The method of claim 1, wherein at least one of said plurality of outside  
node groups is associated with only one outside node.

22. (New) The modified GUI of claim 6, wherein at least one of said plurality of  
groups of outside network devices is associated with only one outside network  
device.

23. (New) The modified GUI of claim 13, wherein at least one of said groups of  
outside network devices is associated with only one outside network device.